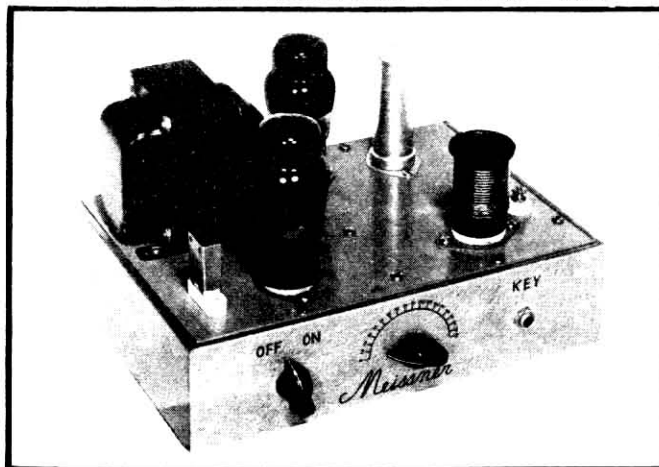




INSTRUCTIONS

For The ASSEMBLY and OPERATION

Of The MEISSNER 2-CW KIT



*This Kit available from
your Local Distributor.*

The Meissner 2-CW Transmitter Kit has been designed for both ease of assembly and simplicity of operation. Properly assembled the 14 watt (input) CW transmitter will afford many hours of operating pleasure.

The Meissner 2-CW was designed primarily for novice license operation on the 3.7-3.75 MC (coil tunes 3.5-4) band. It may also be used on the novice 26.96-27.23 MC band with proper crystal and coil. The Meissner 2-CW will operate on the 7.0-7.3, 14.0-14.4, and 21.0 to 21.45 MC bands, when used with proper crystal and coils as an AC powered transmitter or exciter. The Meissner 2-CW will operate on DC for portable or emergency use. The coil supplied with this kit is for 3.7-3.75 MC operation. Coils for other bands are available through your jobber.

Assembly of the 2-CW is made after you have read all of the instructions carefully, and studied the photographs with the parts laid out so that the entire construction can be mentally pictured. When you are able to picture each part and its place in the schematic diagram you are ready to make a step by step construction, testing as you proceed.

The first step is to mount the large components as given in the detailed instructions with the kit.

The second step is to install the small parts, wiring and testing as you proceed. All leads should be short and direct. When stripping the insulation from leads cut through the insulation about 3/8" back from the cut end being sure to scrape the wire and twist the strands tightly together. This is not necessary on the push back wire supplied as the insulation is made

to push back on the tinned wire.

The pictorial diagram shows proper small parts placement. All leads, other than insulated leads, should be kept 1/4" from the chassis. Proceed to wire and test as given in the detailed instructions with the kit.

1. Connect and solder the power transformer primary and the on-off switch.
2. Connect and solder the rectifier filament leads.
3. Wire and solder the H. V. transformer leads.
4. Test the wiring by plugging in the line cord and turning on the set. Measure voltage with an AC voltmeter from the top of the chassis.
5. Connect and wire the 6V6 filament.
6. Test to see if the 6V6 filament lights.
7. Wire the choke.
8. Connect and solder the filter condenser.
9. Mount and solder the bleeder in place.
10. Test this circuit with a D. C. voltmeter.
11. Wire the 6V6 cathode.
12. Wire the parallel fed plate of the 6V6.
13. Connect and solder the R. F. output connection checking continuity as given on the chart.
14. Mount and solder the screen bleeder and the screen by-passes. Check this circuit with an ohmmeter using the chart supplied.
15. Connect and solder the control grid circuit of the 6V6 checking as before.

OPERATION

AN AMATEUR RADIO LICENSE IS REQUIRED TO OPERATE THIS TRANSMITTER.

After the wiring has been completed and checked as given the 2-CW may be resonated.

Plug in the tubes, crystal and coil. Connect a D. C. milliammeter 0-100 ma, across the metering terminals of the terminal strip. If you do not have a meter a #40 mazda lamp will work.

Connect an eight watt bulb across the output terminals. Plug in the key jack and turn on the power.

Allow a few seconds for the tubes to warm up, and while observing the meter close the key until the meter comes to rest. Note the current reading on the meter or the brilliance of the bulb.

Rotate the variable condenser through its range and notice that the meter current dips or the bulb dims. This point is the resonance point and it is the position where the plate circuit of the oscillator is tuned to the frequency of the crystal. The correct operating point is not at absolute minimum but at a point slightly toward the side of gradual decrease of plate current as shown on the meter or bulb.

Set the variable condenser at the operating point, turn off the switch, and remove the antenna load. You are now ready to connect the antenna. Remember, a licensed operator must operate this transmitter. There are no exceptions.

The 2-CW output circuit is designed to operate into a balanced line of any length. This may be made of 300 ohm twin lead or open wire line. To determine the antenna length for a balanced line using a folded doublet antenna the equation is:

$$L = 468 / F$$

L — Required length of antenna in feet.
F — The crystal frequency in megacycles.

The 2-CW may be operated into multipliers or other tubes or link coupled to antenna tuners. However, capacity coupling is not recommended if harmonic outputs will result in undesired television interference (TVI).

With little change the 2-CW may be operated on emergency power supplies. Should the antenna load exceed 65 ma. when properly tuned the antenna coupling coil should be spread slightly, moving the bottom turn away from the large coil. Continue uncoupling the coil until the plate current falls below 65 ma.

SCHEMATIC DIAGRAM

6V6

3

4

5

8

7

2

XTAL

RFC 2.5MH #19-1996

100,000 Ω 1W CARBON

KEY

.01 600V PAPER

100,000 Ω 1W CARBON

2W CARBON

18000 Ω

RFC 2.5MH #19-1996

100MHF #21-5203

PLUG IN COIL #18-3914 SUPPLIED

BALANCED LINE

RF OUTPUT

GROUND B-

H.V. -6.3 BATTERY

T-24R02-U

S.P.S.T. SWITCH

110 V

60~AC

350

350

5V 2A

6.3 V

5U4G

4

6

2

8

8 HYS. 40MA FILTER CHOKE T-20C52 *

30,000 Ω 10W WIRE WOUND

TO 6V6

6.3 V AC

CENTER TAP OF FIL. WINDING 6.3 V NOT USED

CAPACITY COUPLING IS NOT RECOMMENDED DUE TO RADIATION OF HARMONICS AND RESULTING T.V.I.

2-CW KIT PARTS LIST

DESCRIPTION

	PART NO.		PART NO.
Chassis.....	06401	10-32 Ext. Lockwashers.....	11604
Transformer.....	T-24R02U	1 Ins. Tie Point.....	06402
Choke.....	T-20C52 *	1 Ins. Tie Point.....	15787
Filter Condenser.....	16124	1/2" Grommet.....	14223
Variable Condenser.....	21-5203	Hardware Kit.....	06412
Socket 8 Prong.....	9309	6-32 X 3/8 RHB Screws.....	11212
Socket 5 Prong.....	29316	6-32 X 1/4 St. Cp. Hex Nut.....	11322
Crystal Socket.....	29628	1/8 Ext. Lockwashers.....	16642
Phone Jack.....	19470	Mae West Lug #6.....	11422
Switch.....	19475	Cond. Mounting Plate.....	19286
RF Choke.....	19-1996	6-32 X 3/16" BH ST CP Screw.....	17668
Line Cord.....	12434	Hardware Kit.....	06413
Terminal Strip.....	21723	4-36 X 5/8 RHB CP Screw.....	11204
.01 600V Paper Condenser.....	28101	4-36 X 3/16 St. CP Nut.....	11336
.1 600V Paper Condenser.....	34158	6-32 X 1-1/8 RHB Screw.....	11215
100,000 Ohm 1 Watt Carbon Resistor 20%.....	RC30AE104M	6-32 X 5/16 Brass Nut.....	11303
18,000 Ohm 2 Watt Carbon Resistor 20%.....	RC40AE183M	Lockwasher.....	16639
2 Ins. Tie Point.....	16752	6-32 Knurled Nut.....	11347
30K 10W Wire Wound Resistor.....	R-1637	3-8 Hex Nut.....	21336
Knobs.....	23-8221	3/8 Int. Lockwasher.....	21619
Ceramic Insulator Sets.....	27-1000	3/8 ID X 5/8 OD Flat Washer.....	19470-C
Hardware Kit.....	06411	Plug in Coil.....	18-3914
10-32 X 3-8 FHB Screws.....	18607	Instruction Sheet.....	J-516
10-32 Nuts.....	11352		